

The Aim of Backtesting - We are NOT trying to build the Ultimate Strategy

Aim of Backtesting

The aim of backtesting is to:

- 1) Check if our strategy performs well in periods when it is supposed to, and if it does not perform well in periods when it is not supposed to.
- 2) Understand how our strategy performs in different markets.
- 3) Get insights on how the strategy might be improved on.

With the above 2 understandings, we can then improve our strategies and manage them better when the market smacks us with different environments.

The 3rd point is easily misused. You can use backtests to make small tweaks to your already viable strategies.

But in general, you should not be using backtests to come up with profitable strategies. This usually leads to [overfitting](#) and [p-hacking](#). We will talk about overfitting in the optimisation chapter.

The Ultimate Strategy

It is important to note that the aim of backtesting is not to build the ultimate strategy¹ that can withstand all market conditions.

We should not be trying to build something like that.

If you want to sell jewelry, would you try to sell meat, furniture and everything else along with it? No, you wouldn't. Selling more variety doesn't necessarily equate to higher overall sales. You don't try to be above average in everything, you want to focus on jewelry and do it very well.

Similarly, in trading, your strategy need not strive in all conditions. It just needs to do very well in one market condition, and as a trader, you deploy it when the market condition is right.

For instance, if your strategy performs in low volatility environments, turn it off or size down manually when an unexpected crisis like a pandemic hit. You can then deploy another strategy that performs well in a high volatility environment.

Yes, your strategy should adapt to expected changes in volatility but when an extreme event happens, or if an environment that we know isn't good for our strategy happens, we need to step in.

Portfolio Robustness

Robustness means to strive in different conditions.

¹ There isn't such a thing as an ultimate strategy but we will look at one strategy (bond futures calendar spread) in the PT101 course that is close to that.

A single strategy might not do well in different conditions, but a portfolio of many strategies can.

Once you have many strategies, you can think of building 1) a well-rounded portfolio of strategies with 2) proper human intervention.

You'll learn about portfolio design in later chapters.

That said, even with one strategy, you can survive well in many market conditions. Just deploy when the time is right and remove your strategy when it is not.

Ideally, you want a portfolio of strategies that are independent. In addition, you want to design strategies that are sandboxed and well-hedged against unwanted risks. We will talk more about this in [PT101](#).

Don't force a trade when there is none

Don't be concerned about not having a portfolio of strategies.

Profitable strategies are hard to come by. I've only had 4 working strategies in my trading lifetime. There might be months of lull where nothing works. The key is to know when to let go.

As a retail trader, it is okay to not trade all the time. Forcing a trade equates to losing money. Losing money causes you to be at a lower starting point when you find your next working strategy.

Not trading when you don't have a working trading strategy is almost as important as trading when you have one.

But of course, during times where you are not running a profitable strategy, you should still be testing new ideas (on demo money or small amounts of real money).

In fact, you should always be testing new ideas, and improving old ones, even when you have a working strategy.

Having more strategies doesn't equal to more returns

If you have two equally good strategies, you need to split your capital among them. Hence, the overall returns will be the same.

That said, if the strategies are [independent](#), having more strategies does increase your overall reward per risk taken. Explanation by Ray Dalio (top hedge fund manager):
<https://www.youtube.com/watch?v=Nu4lHaSh7D4>

Conclusion: If possible, have multiple independent good strategies. If you can't find more than one good strategy, just stick to one and don't forcefully deploy other questionable strategies.